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Concl'd

September 12, 1989 which is a continuation-in-part of 07/655,579 filed March 18, 1991 which is a divisional of 07/179,100 filed April 8, 1988 (US Patent 5,013,649) which is a continuation- in- part of 07/028,285 filed March 20, 1987(abandoned) ;which is a continuation- in-part of 06/943,332 filed December 17, 1986 (abandoned) which is a continuation-in-part of 06/880,776 filed July 1, 1986, abandoned.

In the Claims:

Please add new claims as follows:

24. An isolated DNA molecule comprising a DNA sequence selected from the group consisting of:

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- (a) nucleotides 1202 through 1543 of Figure 2;
 - (b) nucleotide 1252 through 1543 of Figure 2;
 - (c) nucleotides 1279 through 1626 of Figure 3;
 - (d) nucleotides 1333 through 1626 of Figure 3;
 - (e) nucleotides encoding amino acids 283 through 396 of Figure 2;
 - (f) nucleotides encoding amino acids 299 through 396 of Figure 2;
 - (g) nucleotides encoding amino acids 293 through 408 of Figure 3;
 - (h) nucleotides encoding amino acids 311 through 408 of Figure 3; and
 - (i) naturally occurring allelic sequences and equivalent degenerative codon sequences

of (a) through (h).

25. An isolated DNA molecule comprising a DNA sequence of nucleotides 1202 through 1543 of Figure 2.

26. An isolated DNA molecule comprising a DNA sequence of nucleotide 1252 through 1543 of Figure 2.

27. An isolated DNA molecule comprising a DNA sequence of nucleotides 1279 through 1626 of Figure 3.

28. An isolated DNA molecule comprising a DNA sequence of nucleotides 1333 through 1626 of Figure 3.

29. An isolated DNA molecule comprising a DNA sequence of nucleotides encoding amino acids 283 through 396 of Figure 2.

30. An isolated DNA molecule comprising a DNA sequence of nucleotides encoding amino acids 299 through 396 of Figure 2.

31. An isolated DNA molecule comprising a DNA sequence of nucleotides encoding amino acids 293 through 408 of Figure 3.

32. An isolated DNA molecule comprising a DNA sequence of nucleotides encoding amino acids 311 through 408 of Figure 3.

33. An isolated DNA sequence encoding BMP-2 protein which hybridizes to a DNA sequence of claim 30 under stringent hybridization conditions.

34. An isolated DNA sequence encoding BMP-4 protein which hybridizes to a DNA sequence of claim 32 under stringent hybridization conditions.

35. A vector comprising a DNA molecule of claim 24 in operative association with an expression control sequence therefor.

36. A vector comprising a DNA molecule of claim 33 in operative association with an expression control sequence therefor.

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37. A vector comprising a DNA molecule of claim 34 in operative association with an expression control sequence therefor.

38. A host cell transformed with a vector of claim 35.

39. A host cell transformed with a vector of claim 36.

40. A host cell transformed with a vector of claim 37.

41. An isolated DNA molecule comprising a DNA selected from the group consisting of ATCC deposits 40345 and 40342.

42. A method for producing a BMP-2 protein said method comprising the steps of:

(a) culturing a host cell transformed with a DNA sequence of claim 33, and;

(b) recovering said BMP-2 protein.

43. A method for producing BMP-4 protein, said method comprising the steps of:

(a) culturing a host cell transformed with a DNA sequence of claim 34, and;

(b) recovering said BMP-4 protein.

44. A BMP-2 made by the method of claim 42.

45. A purified BMP-2 polypeptide comprising an amino acid sequence encoded by a DNA sequence comprising nucleotides 1202 through 1543 of Figure 2.

46. A purified BMP-2 polypeptide comprising an amino acid sequence encoded by a DNA sequence comprising nucleotides 1252 through 1543 of Figure 2.

47. A purified BMP-2 protein comprising an amino acid sequence of amino acid 283 through 396 of Figure 2.

48. A purified BMP-2 protein comprising an amino acid sequence of amino acid 299 through 396 of Figure 2.

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